

Research Article

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Pattern of Low Back Pain and Associated Factors among Ethnic Pregnant Women in Rangamati District of Bangladesh



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Abstract

A cross-sectional study was conducted to identify the state of pattern low back pain and associated factors among ethnic pregnant women in Bangladesh. Considering time and resource availability, cross-sectional analytical study design was most feasible for this study. The subjects were selected conveniently and conducted among 230 pregnant women residing in Rangamati hilly district. Face to face interview was carried out. Low back pain status was determined by taking history and conducting physical examination. Medical records were checked if available. Majority of the respondents (31.7%) completed HSC followed by graduation 22.6%, primary 21.3%, SSC 13.0% and post-graduate 1.7% and most of them were housewives. Prevalence of low back pain was 66.10%. Acute and sub-acute pain was nearly equal distribution i.e 49.70% and 48.40%. Localized low back pain was widely prevalent (79.90%) followed by referred pain (15.60%) and radiating pain (4.50%). Statistical strong significant association was found between trimester and low back pain ($p=0.000<0.05$). Wide prevalence of low back pain was seen among pregnant ethnic women namely acute and sub-acute and localized.

Keywords: Low back pain; Ethnic Pregnant Women; Bangladesh

Introduction

Pregnancy related low back pain is a common complaint among pregnant women. It can potentially have a negative impact on their quality of life. Most women are affected in their first pregnancy [1]. Eighty percent of women suffering from LBP claim that it affects their daily routine and 10% of them report that they are unable to work [2]. Pregnancy related LBP usually begins between the 20th and the 28th week of gestation, however it may have an earlier onset. The duration varies. A study in Netherland shows that 38% of women still have symptoms at 3 months postpartum and 13.8% at 12 months [3]. LBP during pregnancy is the most important risk factor for postpartum LBP and the existing literature supports LBP as the leading reason for sick leave, as far as pregnant working women are concerned [4]. Bangladesh has several ethnic minor group populations, and they lead their life in great ethnic diverse fashion. They constitute about 1.1% of total population. They are distributed in scattered way all over the hilly, riverine and dense forest region of the country. Ethnic people are distinct from Bengali people by their ethnic origin, culture,

feeding practice, literacy rate and profession. Locally, there is no literature on pregnancy and low back pain among ethnic pregnant women [5].

Materials and Methods

Study design

Cross-sectional analytical study design.

Study Period

November 2018 to April, 2019.

Study place

This study was conducted in Rangamati hilly district.

Study population

Ethnic pregnant women live in Rangamati sadar upazila of Chittagong Hill Tracts

Criteria for selection

Inclusion criteria

- Ethnic pregnant women
- Age group 19 to 39 years (In Bangladesh, the legal minimum age of marriage is 18 for women. Though many girls marry before the age 18, they are excluded from the study as their marriages are not legally approved. Women over the age 39 are also excluded as instances of their being pregnant are very limited)
- Willing to participate

Exclusive criteria

- Not willing to participate
- Below 19 years and above 39 years

Sampling technique

Non-probability convenient sampling was used to collect study subjects.

Data processing and Analysis

After administering questionnaire, data were checked for consistency. Individual sheet was checked and cleaned to avoid any error. Data were categorized and coded during entry into the SPSS software. Collected data were analyzed by computer technology SPSS version 22.0. Collected information was presented in the form of tables and graphs. Descriptive statistics (mean, SD, frequency, percentage) and inferential statistics (Chi-

square) were used.

Limitations of the Study

During my study, I had to face some limitations. As I had to depend on the verbal response of the respondents, there might have been some discrepancy on their income level. There might have been a bit of inaccuracy in collected information because I had to depend on their history and physical examination.

Ethical Consideration

Permission from ethical review committee of Gono Bishwabidyalay was taken. Consent was sought from old home authority. The study never discloses the name and personal information of any individual respondent at any point of time. Respondent's right to refuse and withdraw from the study was accepted.

Result

The Table 1 reveals that average age of the respondents was 26.21 ± 4.73 years. Majority of the subjects (81.7%) belonged to 19-29 years and 18.3% belonged to 30-39 years. According to Table 2, most of the respondents were housewives (56.1%). It was followed by service and business which were 20.0% and 19.1% respectively. In the Figure 1 it is revealed that prevalence of low back pain was quite double (66.10%) than who did not have the sufferings (33.90%). The Figure 2 reveals that acute and sub-acute pain was nearly equal distribution i.e 49.70% and 48.40%. Prevalence of chronic pain was 2%.

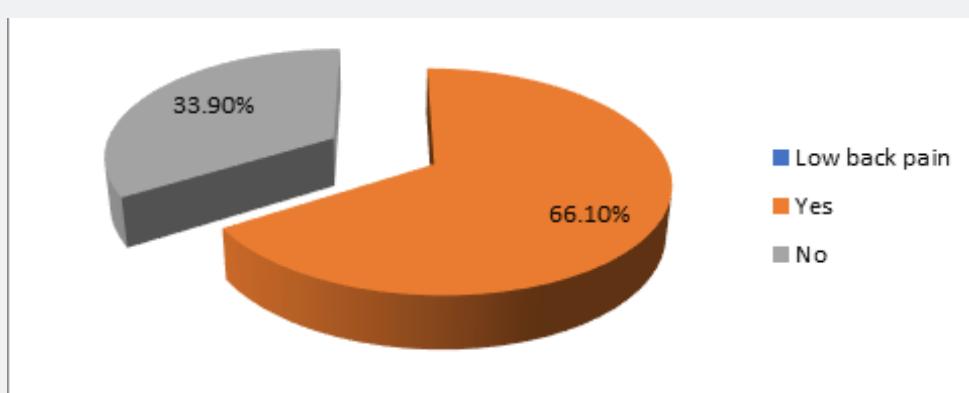


Figure 1: Prevalence of low back pain (n=230).

Table 1: Age group of the study subjects (n=230).

Age in year	Frequency	Percentage
19-29	188	81.7
30-39	42	18.3
Total	230	100.0
Mean±SD	26.21 ± 4.73	

Table 2: Occupation of the study subjects (n=230).

Occupation	Frequency	Percentage
Housewife	129	56.1
Service	46	20.0
Business	44	19.1
Others	11	4.8
Total	230	100.0

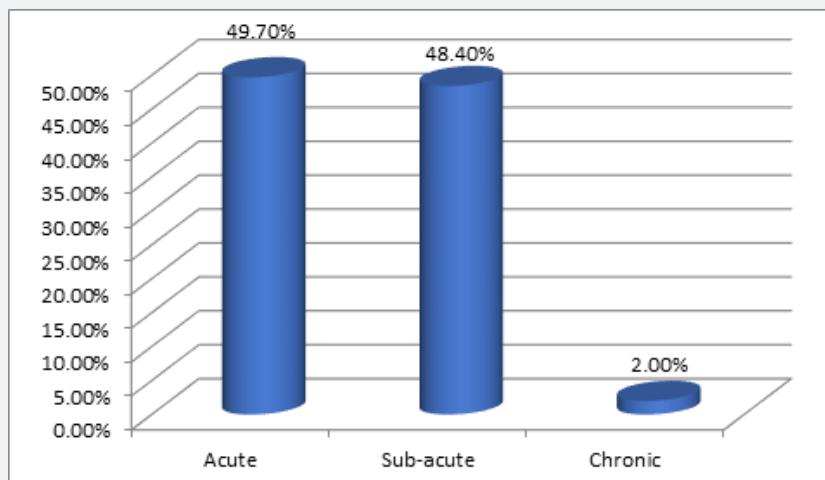


Figure 2: Nature of low back pain (n=153).

According to Table 3, acute and sub-acute low back pain was mostly found during third trimester. It is shown in the Figure 3 that localized low back pain was widely prevalent (79.90%) followed by referred pain (15.60%) and radiating pain (4.50%). Figure 4 of the respondents, intermittent pain was quite double (62.30%) than constant pain (37.70%). No statistical significant

association was found between age group and low back pain (Table 4). No statistical significant association was found between occupation and low back pain (Table 5). In the Table 6, it is shown that p-value was 0.000 which was less than 0.05. So, statistical strong significant association was found between trimester and low back pain.

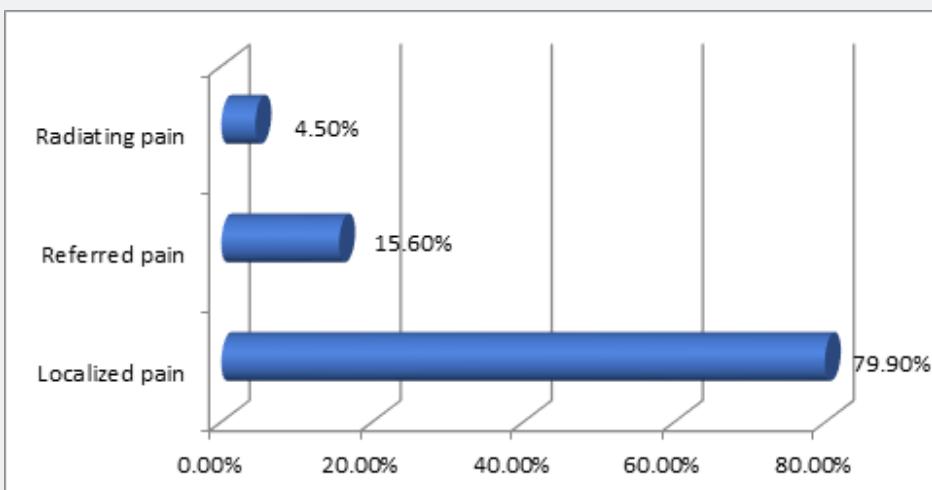


Figure 3: Magnitude of pain (n=153).

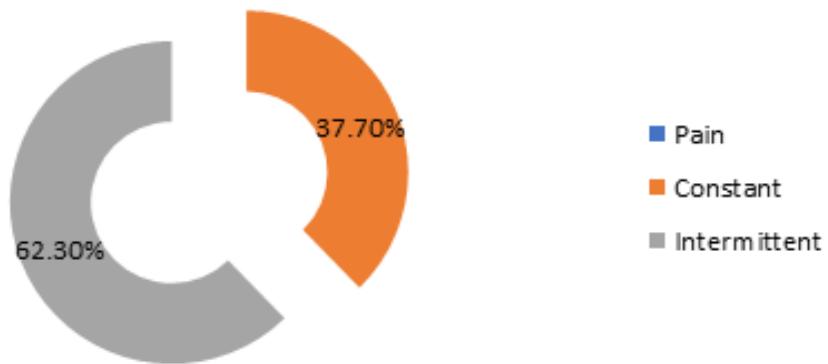


Figure 4: Type of low back pain (n=153).

Table 3: Nature of Low Back Pain According to Trimester (n=153).

Trimester	Nature of Pain			Total
	Acute	Sub-acute	Chronic	
First	14	12	2	28
Second	28	22	1	51
Third	34	40	0	74

Table 4: Association between age group and low back pain.

Age group	Low back pain		Total	χ^2	p-value
	Yes	No			
19-29	120(52.2)	32(13.9)	152(66.1)		
30-39	68(29.6)	10(4.3)	78(33.9)	2.340	0.126
Total	188(81.7)	42(18.3)	230(100.0)		

Table 5: Association between occupation and low back pain.

Occupation	Low back pain		Total	χ^2	p-value
	Yes	No			
Housewife	88(38.3)	41(17.8)	129(56.1)		
Service	3 (13.0)	16(7.0)	46(20.0)		
Business	30(13.0)	14(6.1)	44(19.1)	4.699	0.195
Others	4(1.7)	7(3.0)	11(4.8)		
Total	185(80.4)	45(19.6)	230(100.0)		

Table 6: Association between trimester and low back pain.

Trimester	Low back pain		Total	χ^2	p-value
	Yes	No			
First	28(12.2)	38(16.5)	66(28.7)		
Second	50(21.7)	27(11.7)	77(33.5)		
Third	74(32.2)	13(5.7)	87(37.8)	30.504	0.000
Total	152(66.1)	78(33.9)	230(100.0)		

Discussion

The present study reveals that average age of the respondents was 26.21 ± 4.73 years. Majority of the subjects belonged to 19-29 years. Most of the respondents were housewives. It was revealed in the study that prevalence of low back pain was quite double than who did not have the sufferings. The study shows that acute and sub-acute pain was nearly equal distribution. Prevalence of chronic pain was 2%. It is shown in the study that localized low back pain was widely prevalent followed by referred pain and radiating pain. Of the respondents, intermittent pain was quite double than constant pain. In the study no statistical significant association was found between age group and low back pain. There was no statistical significant association found between occupation and low back pain. Similarly, no statistical significant association was found between monthly family income and low back pain. In the study statistical strong significant association was found between trimester and low back pain. At a study on Iranian women found the prevalence of LBP during pregnancy was 57.3%, which is nearly like most other countries [6]. In Swedish women the prevalence of low back pain during pregnancy was 49% [7].

In another study on Swedish women found that 68.5% respondents reported experiencing LBP during their current pregnancy [8]. Peter and Ulrich (2011) mentioned that as many as 80% of pregnant women will experience low back pain, especially in their third trimester of the pregnancy [9]. Another study found that, the 2nd and early-3rd trimesters are the period when backache is most prevalent [6]. In a study on North American women, it was found that, severe low back pain during pregnancy is at extremely high risk for developing a new episode of severe low back pain during a subsequent pregnancy as well as later in life [10]. In a study among the pregnant women of Sweden, it was found that, multiparty is a risk factor for LBP of current pregnancy [11]. Evidence suggests that low back pain can occur if any job involves lifting and carrying heavy objects, or if anyone spends a lot of time sitting or standing in one position or bending over [12]. Based on the study findings, the recommendations can be made with a view to minimizing low back pain and associated factors among ethnic pregnant women in Bangladesh. Awareness should be created among pregnant women and those who are planning to become pregnant.

Participation in prophylactic education and strengthening programs can be introduced during early pregnancy to avoid low back pain. Pregnant women during their whole pregnancy period should follow several effective measures like strengthening the back muscles with pregnancy-friendly exercises, maintaining a healthy weight, avoiding standing for long period, practicing good

posture and proper weightlifting technique, etc. Training of health professionals for effective management of pregnant women suffering from low back pain is needed. More sample-based study can be conducted to get more precise and accurate result which can be both qualitative and quantitative in nature

Conclusion

The study concludes that most of the ethnic pregnant women suffer from low back pain. Acute and sub-acute pain among the pregnant women was nearly equal distribution. But prevalence of chronic pain very insignificant among them. The study revealed that localized low back pain was widely prevalent followed by referred pain and radiating pain. Of the respondents, intermittent pain was quite double than constant pain. In the study statistical strong significant association was found between trimester and low back pain.

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